D. REMARKS

Status of the Claims

Claims 1-2, 4-9, 11-15, and 17-25 are currently present in the Application, and claims 1, 8, 14, and 21-25 are independent claims. Claims 1-2, 4-5, 7-9, 11-12, 14-15, 17-18, and 20-25 have been amended, and claims 3, 10, and 16 have been canceled. No claims have been added.

Examiner Interview

Applicants note with appreciation the telephonic interview conducted between Applicants' representative and the Examiner on May 19, 2005. During the telephonic interview, the Examiner and Applicants' representative discussed the 102 and 103 references (Turicchi, Jr. et al., U.S. Patent No. 6,628,994 and Umberger et al., U.S. Pub. No. 2002/0091746). In particular, Applicants' representative discussed that Applicants' invention adjusts input parameter values based upon whether a previous adjustment resulted in a corresponding output variable being closer to a performance goal. In contrast, Turicchi teaches incrementing an input parameter value over a pre-determined range, and once the range limit is reached, Turicchi selects the input parameter value whose corresponding output value is closest to a performance goal.

Applicants' representative continued to discuss the differences between Applicants' invention and Umberger in that Umberger distributes processing resources over a plurality of workloads, and if one workload is exceeding its processing limit, Umberger increases the other workload's priority, which is different than adjusting a corresponding input parameter as claimed by Applicants.

The Examiner agreed that by including a "variable output change comparison to a performance goal" limitation in Applicants' independent claims, such as the limitations included in claim 3, that Applicants' amended independent claims would read over Turicchi and Umberger. Applicants have included such amendment in this response.

Drawings

The Office Action did not indicate whether the formal drawings filed by the Applicants are accepted by the Examiner. Applicants respectfully request that the Examiner indicate whether the drawings filed on January 12, 2004 are accepted by the Examiner in the next communication.

Specification Objections

The disclosure is objected to because of particular wording informalities. Applicants have amended the specification to correct such informalities, and request removal of the objections to the disclosure.

Claim Objections

Claims 8 and 23 are objected to because of particular wording informalities. Applicants have amended claims 8 and 23 to correct such informalities, and request removal of the objections to claims 8 and 23.

Claim Rejections

Claims 1, 2, 5-9, 12-15, 18-21, 23 and 24 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Turicchi, Jr., et al. (U.S. Patent No. 6,628,994, hereinafter "Turicchi"). Applicants respectfully traverse these rejections.

Claims 4, 11, 17, 22, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Turicchi in view of Umberger et al. (U.S. Publication No. 2002/0091746, hereinafter "Umberger"). Applicants respectfully traverse these rejections.

As discussed with the Examiner, Applicants have incorporated the limitations of claim 3 into Applicants' independent claims in order for Applicants' invention to clearly read over the art of record. Applicants' independent claims as amended are directed to "optimizing input parameters" with limitations including:

- receiving one or more performance goals;
- retrieving a first input parameter value from a plurality of input parameter values, the plurality of input parameter values corresponding to one or more of the performance goals;
- providing the first input parameter value to a test system;
- receiving one or more first output variables from the test system corresponding to the first input parameter value;
- adjusting the first input parameter value;
- providing the adjusted first input parameter value to the test system;
- receiving one or more second output variables from the test system corresponding to the adjusted first input parameter value;
- determining whether the second output variables are closer than the first output variables to one or more of the performance goals; and
- optimizing the adjusted first input parameter value based upon the determination.

Applicants' claim 1 adjusts an input parameter and compares output variable changes to a performance goal after each

adjustment in order to determine whether to continue to adjust the input variable and, if so, in what direction. The Office Action states that Turicchi does not teach adjusting an input variable based upon whether a corresponding output variable is closer to a performance goal, and indeed Turicchi does not.

In fact, Turicchi teaches away from "determining whether second output variables are closer than first output variables to one or more of the performance goals" as claimed by Applicants. Turicchi teaches incrementing an input parameter value over a pre-determined range, and once the range limit is reached, Turicchi selects the input parameter value whose corresponding output value is closest to a performance goal. Turicchi states that:

> "As the computer system runs, the representative embodiments of the present patent document adjusts parameter values over a predetermined interval" (col. 2, lines 8-12)

In addition, Turicchi shows in Figure 2 that an input parameter value is incremented throughout the pre-determined range until the input parameter value reaches the range limit (blocks 250-270). Only after the range limit is reached is an input parameter value selected that provides an optimal system performance (block 280). Turicchi does not depend upon immediate output variable feedback because Turicchi teaches to:

> "automatically mak[e] minor adjustments to computer system parameters and compar[e] long-term associated performance changes in order to set parameter values so as to obtain improved system performance." (Abstract, emphasis added)

Therefore, since Turicchi teaches away from "determining whether second output variables are closer than first output variables to one or more of the performance goals," there is no motivation to combine a reference with Turicchi that teaches such limitation.

However, the Office Action combines Turicchi with Umberger and suggests that Umberger teaches such limitation. As discussed above, there is no motivation to combine Turicchi with Umberger because Turicchi teaches away from such combination. In addition, upon closer inspection of Umberger, Umberger does not actually teach "determining whether second output variables are closer than first output variables to one or more of the performance goals" as claimed by Applicants. Rather, Umberger simply teaches incrementing or decrementing workload priority based upon existing processor resource load and does not take into account the effect of previous input parameter adjustments. In addition, when Umberger wishes to decrease processing resources for a particular workload, Umberger simply increases the priority of the **other** workloads. Specifically, by viewing Figure 8 and paragraph 66, Umberger teaches:

> "if decision triangle 802 yields a condition in which **workload A demands** a service level in excess of 70% while workload B continues to require 30%...ranking controller 704... preferably establishes **workload B's** ranking priority higher than that of workload A's in step 803." (emphasis added)

Applicants' invention solves the problem when it is unknown which direction to adjust an input parameter (increment or decrement) in order to move an output parameter closer to a performance goal. In order to determine how to optimize the input parameter, Applicants compare two output values that

correspond to two different input parameter values and determine which one of the output values is closer to a performance goal. For example, if the input parameter value was increased and caused the output value to be closer to a performance goal, Applicants' invention may increase the input parameter value again in order to move the output value closer to the performance goal. However, in another example, if the input parameter value was increased and caused the output value to be farther away from a performance goal, Applicants' invention may decrease the input parameter value in order to move the output value closer to the performance goal.

As can be seen, Umberger does not teach or suggest, in whole or in part, "determining whether second output variables are closer than first output variables to one or more of the performance goals" as claimed by Applicants. Therefore, since neither Turicchi nor Umberger teach or suggest, either alone or in combination with each other, all of the limitations included in Applicants' amended claim 1, claim 1 as amended is allowable over Turicchi in view of Umberger.

Claims 21 and 22 are method claims including at least the same limitations of claim 1 and, therefore, are allowable for at least the same reason as claim 1. Claims 8 and 23 are information handling claims including at least the same limitations of claim 1 and, therefore, are allowable for at least the same reason as claim 1. Claims 14, 24, and 25 are computer program product claims including at least the same limitations of claim 1 and, therefore, are allowable for at least the same reason as claim 1.

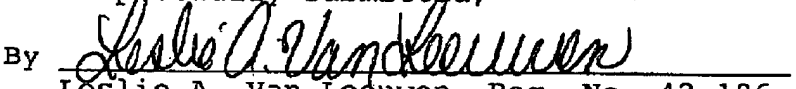
Each of the remaining claims 2, 4-7, 9, 11-14, 15, and 17-20 each depend, directly or indirectly, on one of the allowable independent claims 1, 8, and 14. Therefore, claims 2, 4-7, 9, 11-14, 15, and 17-20 are also allowable for at least the same reasons that their respective independent claims are allowable.

Conclusion

As a result of the foregoing, it is asserted by Applicants that the remaining claims in the Application are in condition for allowance, and Applicants respectfully request an early allowance of such claims.

Applicants respectfully request that the Examiner contact the Applicants' attorney listed below if the Examiner believes that such a discussion would be helpful in resolving any remaining questions or issues related to this Application.

Respectfully submitted,

By 

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